

Abstract Of The Disclosure

A position control device for causing a position of a control system, including a servomotor and a moving body driven by the servomotor, to track a command value. The position control device includes a sliding mode controller for receiving command position r and state variable x of the control system and for providing a control input u to the servomotor. State variable x is expressed as follows:

$$x = \begin{bmatrix} \theta \\ \dot{\theta} \end{bmatrix},$$

where θ is feedback position and $\dot{\theta}$ is feedback velocity. The position control device also includes a disturbance variable compensator for compensating control input u based on feedback velocity $\dot{\theta}$.